

REMARKS

In the Office Action, claims 32-58 were rejected. By the present Response, claims 32, 38, 45, 49, 52, and 54 are amended, claims 59-92 are canceled, and new claims 93 and 94 are added. Upon entry of the amendments, claims 32-58, 93 and 94 will be pending in the present patent application. Reconsideration and allowance of all pending claims are requested.

Non-rejected Claims

Applicants wish to point out that the Examiner has apparently neglected to specify arguments rejecting or allowing claims 44 and 50. Accordingly, Applicants have not addressed rejection of those claims here. In the event the Examiner maintains any rejections of the pending claims, Applicants would request the Examiner to formulate a position as to these claims in a subsequent *non-final* office action.

Rejections Under 35 U.S.C. §102

The Office Action summarizes claims 32, 41-43, 47 and 48 as rejected under 35 U.S.C. §102(b) as being clearly anticipated by U.S. Patent 5,179,284 issued to Kingsley et al. (hereinafter "Kingsley").

Unlike the encapsulating coating of the present invention, the pellicle layer of Kingsley is never in contact at all with the photodetector array.

In rejecting the sole independent claim 32, the Examiner effectively analyses Kingsley as disclosing an X-ray detector assembly comprising:

- a detector substrate 15;

- a detector matrix array 22 disposed on the detector substrate 15;

- a scintillator material 30 disposed on the array 22;

- an encapsulating coating 40 disposed on the scintillator material 30 and disposed on a first portion of the detector substrate (the portion on which the array and scintillator are disposed);

a reflective layer 52 disposed on the encapsulating coating 40; and
a moisture resistant layer 54 disposed on the reflective layer 52 so as to terminate on the second portion (the portion where there is no array and scintillator material, and is adjacent to the reflector layer 52) of the detector substrate 15; where the moisture resistant layer 54 is positioned on the second portion of the detector substrate 15 to provide a humidity barrier.

Applicants respectfully submit that by the present response claim 32 is amended to recite, *inter alia*, an X-ray detector assembly employing a detector substrate having a plurality of contact pads. A scintillator material is disposed on a detector matrix array disposed on the detector substrate. Further, the X-ray detector assembly includes an encapsulating coating disposed on the scintillator material. Also, the encapsulating coating is disposed on and contacting a detector substrate first portion.

Applicants respectfully submit that the encapsulating coating of the present claim 32 is disposed on the scintillator elements. As set forth in the Application, this recitation corresponds to the encapsulating coating that is disposed between the scintillator elements (needles), all the way to the bottom of each of the scintillator elements in the disclosed embodiment, as in a passage at paragraph 17, lines 6-9.

The cited passage reads:

The “encapsulating coating” as used herein is defined to mean that the encapsulating coating is deposited between the scintillator needle structure all the way to the bottom of each of the scintillator needles along all of the sidewalls of all of the scintillator needles.

On the contrary, the pellicle layer (or element 40) as disclosed by Kingsley is not disposed on or between the scintillator elements. In particular, the pellicle layer is in the form of a thin layer spaced from the scintillator elements and is never in contact with the photodetector array (20). For example, as recited in passages at col. 3, lines 47-53 and lines 56-59 of Kingsley:

[P]ellicle layer 40 is advantageously disposed over first surface 34 of the scintillator. Pellicle layer 40 adheres well to the uneven surface of the scintillator and provides a stable, i.e., firm and reasonably smooth, surface to which moisture barrier 50 can adhere. The pellicle layer is typically very thin, having a thickness between about 200 to 600 Angstroms.

* * *

Pellicle layer 40 can be made in any conventional manner, such as by preparation of the thin layer on a water bath and then setting the layer into place.

Hence, unlike the encapsulating coating of claim 32, which is present on the top of the scintillator elements, the pellicle layer is only disposed in a spaced relation to the scintillator elements in the form of a thin layer or a film.

With regard to claims depending from claim 32, these claims depend directly or indirectly from an allowable base claim, and are therefore considered to be equally allowable.

Rejections Under 35 U.S.C. §103

The Office Action summarizes claims 33-40, 45, 46, 49 and 51-58 as rejected under 35 U.S.C. §103(a) in view of Kingsley and further in view of U.S. Patent 6,781,131 issued to Kusuyama et al. (hereinafter "Kusuyama"), U.S. Patent 6,663,973 issued to Lee et al. (hereinafter "Lee") and U.S. Patent 5,132,539 Kwasnick et al. (hereinafter "Kwasnick").

Applicants respectfully submit that the other references, namely Kusuyama, Lee and Kwasnick, have been reviewed carefully and they do not seem to obviate the deficiencies of the Kingsley reference with respect to claim 32. More particularly, Kusuyama and Lee do not teach an encapsulating coating as disclosed in the present

application. In other words, they do not teach an encapsulating coating which is disposed on the scintillator material and is also present between the needles of the scintillator material down to the detector substrate.

With regard to claims depending from claim 32, these claims depend directly or indirectly from an allowable base claim, and are therefore considered to be equally allowable.

New Claims

New claims 93 and 94 have been added by the present response. Independent claim 93 recites features from claim 32 and additionally recites a protective cover and a protective cover epoxy employed in the X-ray detector assembly of the claim. Claim 93 further recites a detector substrate third portion disposed on the detector substrate, such that the protective cover is disposed over the moisture resistant layer and the detector substrate third portion. The protective cover epoxy of claim 93 is disposed between the protective cover, and the moisture resistant layer is disposed over the detector substrate second portion. The protective cover epoxy is disposed between the protective cover and the detector substrate third portion.

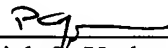
Similarly, new claim 94 recites features from claim 32 and additionally recites a thin film mask disposed on the reflective layer, and the moisture resistant layer disposed on the thin film mask.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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